

REMARKS

Reconsideration and allowance of the present patent application based on the following remarks are respectfully requested.

By this Response, no claims are amended, added or cancelled. Accordingly, after entry of this Amendment, claims 1-12 will be pending in the patent application.

Claims 1-5, 11 and 12 were rejected under 35 U.S.C. § 103(a) based on Norton *et al.* (U.S. Patent No. 4,808,115) (hereinafter "Norton") in view of Olsson (U.S. Patent No. 5,949,300) and Fayfield (U.S. Patent No. 5,644,730). The rejection is respectfully traversed.

Claim 1 recites a network bus coupler mountable on a circuit card, the network bus coupler comprising: a housing; electrical isolation circuitry disposed within the housing; and, connectors disposed exterior of the housing and electrically coupled to the electrical isolation circuitry, the connectors configured to be coupled to the circuit card, wherein the network bus coupler is configured to couple a bus to a device connected to the circuit card. The cited portions of Norton, Olsson and Fayfield do not present a *prima facie* case of obviousness.

The Office Action concedes at page 2 that the cited portions of Norton do not disclose, teach or suggest an isolation circuitry within the housing. However, there are additional features that are absent in the cited portions of Norton. For example, the cited portions of Norton do not disclose, teach or suggest connectors disposed exterior of the housing and electrically coupled to the electrical isolation circuitry, the connectors configured to be coupled to the circuit card.

The Office Action relies on element 128 of Norton as allegedly disclosing, teaching or suggesting the housing of claim 1. *See* Office Action at page 2. The Office Action further relies on elements 50 of Norton as allegedly disclosing, teaching or suggesting the connectors of claim 1. *See* Office Action at page 2. Respectfully, this is incorrect. According to claim 1, the connectors are disposed exterior of the housing and are electrically coupled to the electrical isolation circuitry and to the circuit card. **It is clear that element 128 of Norton cannot possibly correspond to the housing of claim 1.**

Element 128, referred to by the Office Action, merely corresponds to a molded housing insert that has a terminal receiving passageway 130 within which are securable terminal assemblies 132 for optical fiber cable means 134. *See* Norton at col. 8, lines 45-50. As shown in FIG. 7 of Norton, housing 128 of Norton merely includes an alignment rib 154 that is used for adjusting the housing insert 128 to the connector 160. Thus, in the cited portions of Norton, there are no **connectors electrically** coupled to any circuit disposed

within the housing 128, let alone an isolation circuit, and to a circuit card, as recited in claim 1. Further, it is clear that the single rib 154 coupled to the inside of the housing 128, as opposed to the connectors of claim 1, is, in no way, electrically coupled to anything within the inside of the housing 128 and coupled to the circuit cards 30, 40 of Norton (identified by the Office Action as the “circuit card” of claim 1). In Norton, the only connectors that are coupled to the circuit cards 30, 40 are the connectors 50 that include pins 62. However, these connectors are not coupled to anything within the housing 128. Thus, Applicant respectfully submits that the cited portions of Norton do not disclose, teach or suggest a housing, and connectors disposed exterior of the housing and electrically coupled to the circuit card.

The cited portions of Olsson and Fayfield do not remedy the deficiencies of Norton. The cited portions of Olsson disclose a line coupler having a bus line piece, at least one transformer, two electrically shielded housings and a coupling site. *See* Olsson at col. 2, lines 1-8. The cited portions of Fayfield disclose a dual mode binary sensor for bus operation. *See* Fayfield at FIG. 4. With this said, the cited portions of Olsson and Fayfield do not disclose, teach or suggest connectors disposed exterior of the housing and electrically coupled to the electrical isolation circuitry, the connectors configured to be coupled to the circuit card. Therefore, any proper combination of the cited portions of Norton, Olsson and Fayfield cannot result, in any way, in the invention of claim 1.

Further, even assuming *arguendo* that it would have been obvious to position the isolation transformers of Olsson in the housing 128 of Norton, Applicant submits that the obtained device would still not read on claim 1. Specifically, and as noted above, according to claim 1, the connectors are disposed exterior of the housing and are electrically coupled to the electrical isolation circuitry and to the circuit card. Clearly, positioning the isolation transformers of Olsson in the housing 128 of Norton does not remedy the deficiencies of Norton. In such a configuration, there would be no electrical coupling between the connectors 50 of Norton and the isolation transformers located in the housing 128 of Norton.

The Office Action asserts that “it would have been obvious to one of ordinary skill in the art ... to add the isolation transformers of Olsson to the housing of Norton et al. because (a) it provides DC galvanic isolation and prevents short-circuiting between the peripheral devices and the circuit card and between different peripheral devices connected together through the circuit card.” *See* Office Action at page 3. Applicant respectfully disagrees. As noted previously, the housing 128 of Norton is merely adapted to couple an optical cable to the connector 160. Thus, the housing 128 is merely an optical adaptor. Therefore, it is self-evident that the housing 128 is not concerned with DC galvanic isolation and short-circuits.

One skilled in the art will readily acknowledge that there is no need to position the isolation transformers of Olsson in the housing 128 of Norton because no short-circuit will occur. If anything at all, positioning the isolation circuit of Olsson within the housing 128 will render the housing inoperable. As noted previously, housing 128 is merely an optical adaptor, not an electrical adaptor.

The Office Action concedes that the cited portions of Norton do not disclose, teach or suggest the aspect of “the network bus coupler is configured to couple a bus to a device connected to the circuit card.” The Office Action relies on Fayfield as allegedly disclosing, teaching or suggesting these features and asserts that “applying the Norton LRM design modified according to teachings of Olsson for implementing an electrical solution of Fayfield will be advantageous for manufacturer of the Norton system because it will provide them with expanded market niche.” Applicant strenuously disagrees.

First, the cited portions of Fayfield do not disclose, teach or suggest a network bus coupler configured to couple a bus to a device connected to the circuit card. It is not clear what the Office Action considers to be the network bus coupler and the circuit card in Fayfield.

Second, the Office Action has not provided the requisite analysis as to why one of ordinary skill in the art would combine the elements of Norton, Olsson and Fayfield in the manner that the Examiner has proposed. *See KSR Int’l. Co. v. Teleflex, Inc.*, No. 04-1350, slip opinion at page 14 (U.S. Apr. 30, 2007) (a determination must be made as to “whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue. To facilitate review, this analysis should be made explicit”). Instead, the Office Action has only offered a conclusory statement that it would have been obvious to combine the teachings of Fayfield with Norton “because it will provide them with expanded market niche.” (*See* page 4 of the Office Action). This is clearly inadequate under the Supreme Court’s KSR decision. The Office Action’s reason for combining the teachings of Fayfield with Norton and Olsson is merely speculative, not supported by facts, and does not constitute objective evidence to combine and modify the cited references, as required by the Supreme Court. The lack of any cogent reason or objective evidence to combine Fayfield with Norton and Olsson is a fundamental shortcoming of the Office Action’s rejection, and shows that the Examiner is simply engaging in a piecemeal and hindsight reconstruction of the prior art. This is impermissible. *See In re Wesslau*, 353 F.2d 238, 241, 147 USPQ 391, 393 (CCPA 1965) (“Such piecemeal reconstruction of the prior art patents in light of appellant’s disclosure is contrary to the requirements of 35 U.S.C. § 103”).

Accordingly, Applicant respectfully submits that the cited portions of Norton, Olsson and Fayfield fail to present a *prima facie* case of obviousness.

Claims 2-5 are patentable over the cited portions of Norton, Olsson, Fayfield and any combination thereof at least by virtue of their dependency from claim 1 and for the additional features recited therein.

Claim 11 is patentable over the cited portions of Norton, Olsson, Fayfield and any combination thereof for at least similar reasons as provided above for claim 1 and for the features recited therein. Claim 11 recites a network bus coupler mountable on a circuit card, the network bus coupler comprising “a housing configured to house essentially an electrical isolation circuitry; and, connectors disposed exterior of the housing and electrically coupled to the electrical isolation circuitry, the connectors configured to be coupled to the circuit card, wherein the network bus coupler is configured to couple a bus to a device connected to the circuit card.”

As noted previously, the cited portions of Norton, Olsson, and Fayfield do not disclose, teach or suggest a housing and, connectors disposed exterior of the housing and electrically coupled to the electrical isolation circuitry, the connectors configured to be coupled to the circuit card, wherein the network bus coupler is configured to couple a bus to a device connected to the circuit card.

Further, to the extent the Examiner would consider the LRM assembly 12 including metal cover plates 22, 24 as the housing of claim 11, Applicant respectfully submits that such interpretation would still not meet the limitations of claim 11. According to claim 11, the housing is configured to house essentially an electrical isolation circuitry. Thus, even assuming *arguendo* that the transformers of Olsson could be added to the LRM assembly 12 of Norton, the obtained LRM assembly device would not house essentially an electrical isolation circuitry since Norton makes clear that the LRM assembly houses the circuit cards 30, 40, as well as a plurality of other components. *See* Norton at col. 7, lines 5-18.

Claim 12 is patentable over the cited portions of Norton, Olsson, Fayfield and any combination thereof for at least similar reasons as provided above for claim 1 and for the features recited therein. Claim 12 recites a network bus coupler mountable on a circuit card, the network bus coupler consisting essentially of a housing configured to house an electrical isolation circuitry; and connectors disposed exterior of the housing and electrically coupled to the electrical isolation circuitry, the connectors configured to be coupled to the circuit card, wherein the network bus coupler is configured to couple a bus to a device connected to the

circuit card. The cited portions of Norton, Olsson, and Fayfield do not disclose, teach or suggest these features.

Accordingly, reconsideration and withdrawal of claims 1-5, 11 and 12 under 35 U.S.C. § 103(a) based on Norton in view of Olsson and Fayfield are respectfully requested.

Claims 7, 8 and 10 were rejected under 35 U.S.C. § 103(a) based on Fayfield in view of Norton and Olsson. The rejection is respectfully traversed.

Claim 7 recites a system for coupling a device to a bus, said system comprising “a junction box electrically coupled to said device and to said bus; a circuit card disposed in said junction box, said circuit card including a plurality of sockets; and, a modular network bus coupler mountable to said circuit card and configured to couple the bus to the device connected to the circuit card, said bus coupler comprising: a housing; electrical isolation circuitry disposed within the housing; and, a plurality of pins disposed exterior of the housing and engageable with at least some of said sockets of said circuit card, at least some of said pins being electrically coupled to said electrical isolation circuitry.” The cited portions of Norton, Olsson and Fayfield do not present a *prima facie* case of obviousness.

The Office Action concedes that Fayfield does not disclose, teach or suggest a circuit card and a bus coupler including a housing and, a plurality of pins disposed exterior of the housing and engageable with at least some of said sockets of said circuit card, at least some of said pins being electrically coupled to said electrical isolation circuitry.

As noted previously, the cited portions of Norton and Olsson fail to disclose, teach or suggest these features. Therefore, any proper combination of Fayfield, Norton and Olsson cannot result, in any way, in the invention of claim 7.

The Office Action identifies the junction box 108, the optional bus card 10 and the binary sensor 20 of Fayfield as allegedly being, respectively, the junction box, the network bus coupler and the device of claim 7. The Office Action then asserts that it would have been obvious to add the LRM assembly 12 in the junction box 108 of Fayfield. Applicant strenuously disagrees.

First, it appears that the Examiner has merely performed a keyword search for “junction box” and “circuit card” and has failed to correctly interpret the features of claim 7 of the present invention. For example, the cited portions of Fayfield disclose that the binary sensor 20 (identified by the Office Action as the “device” of claim 7) is connected to the junction box via leads 28, 30 and that the optional circuit card 10 (identified by the Office Action as the “network bus coupler” of claim 7) is located at an opposite end of leads 28, 30. *See* Fayfield at col. 4, lines 45-64 and FIGS. 2 and 4. Thus, in view of the fact that the

optional bus card 10 is designed to be located outside the junction box 108, there is no motivation or suggestion to position the optional bus card 10 inside the junction box. Positioning the optional bus card 10 of Fayfield inside the junction box would result in having the binary sensor 20 in the junction box and, therefore, would defeat the purpose of the junction box. As shown in FIG. 5 of Fayfield, the binary sensors 100a, b are all located outside the junction box. Applicant submits that the mere disclosure of a “junction box” and a “bus card” does not read on the invention. Rather, the claim language must be read within its context to correctly interpret the features of the claim.

Second, the Office Action has not provided any objective evidence for combining the teachings of Fayfield and Norton. These two references have nothing to do with each other as evidenced by their separate classification. In addition, the mere fact that references can be combined or modified does not render the resultant combination obvious. *See* MPEP 2143.01(III). Further, the Office Action’s reason for combining the teachings of Fayfield and Norton is merely speculative. The Office Action asserts that it would have been obvious to combine the teachings of Fayfield and Norton because “(a) such solution has an advantage providing easy assembly and replacement for damaged parts of the system and (b) a particular technique of using modular structure for assembly of the electronic system was recognized as part of the ordinary capabilities of one skilled in the art.” In response, Applicant directs the Office Action to MPEP 2143.01(IV) where it is stated that “\*>MERE STATEMENT< THAT THE CLAIMED INVENTION IS WITHIN THE CAPABILITIES OF ONE OF ORDINARY SKILL IN THE ART IS NOT SUFFICIENT BY ITSELF TO ESTABLISH *PRIMA FACIE* OBVIOUSNESS.” Accordingly, Applicant respectfully submits that the Office Action has failed to provide any objective evidence for combining Fayfield and Norton and, therefore, requests that the rejection of claim 7 be withdrawn.

The Office Action then concedes that the cited portions of Fayfield and Norton do not disclose, teach or suggest isolation circuitry. Nonetheless, the Office Action asserts that it would have been obvious to include isolation circuitry in the LRM assembly 12 of Norton because the system of Norton is intended for use in the industry and that the isolation circuitry of Olsson is required by MIL-STD-1553. Applicant strenuously disagrees.

First, Applicant submits that the cited portions of Olsson fail to overcome the deficiencies of Fayfield and Norton noted above. Therefore, any proper combination of Fayfield, Norton and Olsson cannot result in the invention of claim 7.

Second, in order to combine the teachings of Norton and Olsson, the Office Action assumes that the system of Norton is governed by MIL-STD-1533, which is not supported by

facts. Therefore, the Office Action's determination that the system of Olsson must include the isolation circuitry of Olsson "otherwise the manufacturer will not be able to sell his substandard equipment" has no basis. As a matter of fact, according to the Office Action's logic, had an isolation circuitry been required in the system of Norton, as suggested by the Office Action, it is self-evident that it would have already been implemented in such system specifically because "the manufacturer will not be able to sell his substandard equipment."

The lack of any cogent reason or objective evidence to combine Fayfield with Norton and Olsson is a fundamental shortcoming of the Office Action's rejection, and shows that the Examiner is simply engaging in a piecemeal and hindsight reconstruction of the prior art. This is impermissible. *See In re Wesslau*, 353 F.2d 238, 241, 147 USPQ 391, 393 (CCPA 1965) ("Such piecemeal reconstruction of the prior art patents in light of appellant's disclosure is contrary to the requirements of 35 U.S.C. § 103").

Claims 8 and 10 are patentable over the cited portions of Fayfield, Norton, Olsson and any proper combination thereof at least by virtue of their dependency from claim 7 and for the additional features recited therein.

Accordingly, reconsideration and withdrawal of claims 7, 8 and 10 under 35 U.S.C. § 103(a) based on Fayfield, Norton and Olsson are respectfully requested.

Claims 6 and 9 were rejected under 35 U.S.C. § 103(a) based on Norton in view of Olsson, Fayfield and Shaffer (U.S. Patent No. 5,841,778). The rejection is respectfully traversed.

As a preliminary matter, Applicant notes that the Office Action has not provided any reasons for combining the teachings of Fayfield with Norton, Olsson and Schaffer. This rejection is a mere duplicate of the rejection set forth in the last Office Action. This is improper. Applicant respectfully requests that the Office Action provide the required motivation and suggestion for combining the teachings of Fayfield with Norton, Olsson and Schaffer or withdraw the rejection.

Claim 6 is patentable over the cited portions of Norton, Olsson, Fayfield and any combination thereof at least by virtue of its dependency from claim 1 and for the additional features recited therein. Similarly, claim 9 is patentable over the cited portions of Norton, Olsson, Fayfield and any combination thereof at least by virtue of its dependency from claim 7 and for the additional features recited therein.

As noted in Applicant's last Amendment, the cited portions of Shaffer fail to remedy the deficiencies of Norton, Olsson and Fayfield. For example, the cited portions of Shaffer

fail to disclose, teach or suggest electrical isolation circuitry disposed within the housing; and, connectors disposed exterior of the housing and electrically coupled to the electrical isolation circuitry, the connectors configured to be coupled to the circuit card, wherein the network bus coupler is configured to couple a bus to a device connected to the circuit card, as recited in claims 6 and 9. The cited portions of Shaffer merely relate to a system for controlling traffic on a local area network. Thus, any proper combination of Norton, Olsson and Shaffer cannot result in any way in the invention of claims 6 and 9.

Furthermore, Applicant strenuously disagrees with the Office Action's determination that Shaffer inherently discloses a bus terminator disposed in the housing and electrically coupled to a connection disposed exterior of the housing. "In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristics necessarily flow from the teachings of the applied prior art." (See MPEP § 2112 citing Ex Parte Levy, 17 U.S.P.Q. 2d 1461, 1464 (Bd. Pat. App. & Inter. 1990)). (Emphasis added). What the cited portions of Shaffer do disclose are two terminators 110, 160 that are located at opposite sides of a network bus 170. (See FIG. 1 of Shaffer). However, there are no teachings or suggestions in the cited portions of Shaffer, nor in any of the cited references, that terminators 110, 160 should be disposed inside of the housing of a network bus coupler and electrically coupled to a connector exterior of the housing.

Accordingly, reconsideration and withdrawal of the rejection of claims 6 and 9 under 35 U.S.C. § 103(a) based on Norton in view of Olsson and Shaffer are respectfully requested.

All objections and rejections having been addressed, it is respectfully submitted that the present application is in a condition for allowance and a Notice to that effect is earnestly solicited. If any point remains at issue which the Examiner feels may best be resolved through a personal or telephone interview, please contact the undersigned at the telephone number below.

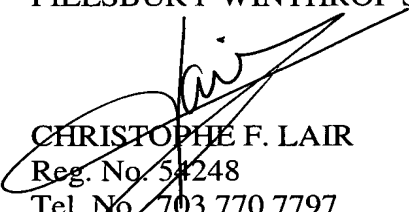


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Respectfully submitted,

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